

Amendments to the Claims:

The following listing of claims replaces all prior versions, and listings, of claims in the application:

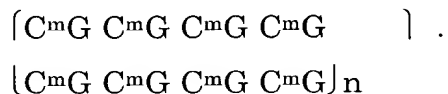
Listings of Claims:

1-31. (Cancelled)

32. (Currently Amended) A method of ~~inhibition of tumorigenesis wherein~~ production of DNA demethylase is increased in comparison with that of a non-tumor cell ~~comprising the step of administering to a patient in need thereof a therapeutically effective amount of~~ altering a methylation activity of DNA demethylase comprising amino acids 150-411 of SEQ ID NO.2, the method comprising inhibiting DNA demethylase with an antagonist or inhibitor of DNA demethylase, thereby altering a methylation pattern in DNA, said DNA demethylase being selected from the group consisting of comprising amino acids 150-411 of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 and SEQ ID NO:8 selected from the group consisting of a double stranded C^mG oligonucleotide, an anti-DNA demethylase antibody, an antisense oligonucleotide of DNA demethylase, imidazole and derivatives of imidazole.

33. (Previously presented) The method according to claim 32, wherein said antagonist is a double stranded C^mG oligonucleotide that inhibits DNA demethylase at a K_i of 50nM.

34. (Previously presented) The method according to claim 33, wherein said oligonucleotide is:



35-40. (Canceled)

41. (New) The method according to claim 32, wherein said antagonist is an anti-DNA demethylase antibody.
42. (New) The method according to claim 32, wherein said antagonist is an antisense oligonucleotide of DNA demethylase.
43. (New) The method according to claim 32, wherein said antagonist is imidazole.
44. (New) The method according to claim 32, wherein said antagonist is a derivative of imidazole.